satson®

User Manual

HDM-MX-2414C

4x4 HDMI Deep Color & full 3D over single Cat.X matrix

Full HD 1080 | WUXGA 1920×1200 | 7.1 CH AUDIO | HDCP | FC | CE | RoHS Compliance | Blu-ray 3D READY | x.v.Color | DOLBY TRUE HD | dts-HD High Resolution Audio | dvi digital visual interface

rev:121122

Made in Taiwan

Safety and Notice

The **HDM-MX-2414C** **4x4 HDMI Deep Color & full 3D over single Cat.X matrix** has been tested for conformance to safety regulations and requirements, and has been certified for international use. However, like all electronic equipments, the **HDM-MX-2414C** should be used with care. Please read and follow the safety instructions to protect yourself from possible injury and to minimize the risk of damage to the unit.

- Follow all instructions and warnings marked on this unit.
- Do not attempt to service this unit yourself, except where explained in this manual.
- Provide proper ventilation and air circulation and do not use near water.
- Keep objects that might damage the device and assure that the placement of this unit is on a stable surface.
- Use only the power adapter and power cords and connection cables designed for this unit.
- Do not use liquid or aerosol cleaners to clean this unit. Always unplug the power to the device before cleaning.

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INTRODUCTION

The **HDM-MX-2414C** **4x4 HDMI Deep Color & full 3D over single Cat.X matrix** provides the most flexible and cost effective solution in the market to route high definition video sources plus multi-channel (up to 7.1-channel) digital audio from any of the four HDMI sources to the remote displays at the same time. Through only one low cost Cat-5/5e/6 LAN cable, not only high quality video and audio can be transmitted to the display sites, but also users can switch among four HDMI sources using the push-in button or remote control. Furthermore, the built-in IR extension function makes users at display site access the DVD player, PS3 or any HDMI supported devices directly!

FEATURES

- Support HDMI Deep Color & full 3D
- HDCP compliant
- Allows any source to be displayed on multiple displays at the same time
- Allows any HDMI display to view any HDMI source at any time
- Supports 7.1 channel digital audio
- Supports default HDMI EDID and learns the EDID of displays
- Bi-directional IR path
- The matrix master can switch every output channels to any HDMI inputs by push-in button, IR remote control, RS-232 control
- Allows controlling local HDMI sources such as DVD and TiVo by attached IR extender from remote receiver to matrix master
- Extends video signal up to 35m (115 feet) over single CAT.X at 1080p and likely longer with better HDMI source device (such as PS3), better grade HDMI display (such as Sony X-series HDTV), and better quality solid CAT6 cable
- Easy installation with rack-mounting and wall-mounting designs for master and receiver respectively
- Fast response time – 2~5 seconds for channel switch

SPECIFICATIONS

Model Name	HDM-MX-2414C	
Technical	**HDM-MX-2414C**	**HDM-MX-2414C-RX**
Role of usage	True 4x4 matrix switcher Transmitter [TX]	Receiver [RX]
HDMI compliance	HDMI Deep Color & full 3D	
HDCP compliance	Yes	
Video bandwidth	Single-link 225MHz [6.75Gbps]	
Video support	480i / 480p / 720p / 1080i / 1080p60 36-bit color	
Audio support	Surround sound (up to 7.1ch) or stereo digital audio	
HDMI over CAT5 transmission range	Full HD (1080p): 35m (115ft) [CAT.X] HD (720p/1080i): 50m (165ft) [CAT.X]	
HDMI equalization	N/A	8-level digital rotary control
Input TMDS signal	1.2 Volts [peak-to-peak]	
Input DDC signal	5 Volts [peak-to-peak, TTL]	
ESD protection	[1] Human body model – ±19kV [air-gap discharge] & ±12kV [contact discharge] [2] Core chipset – ±8kV	
PCB stack-up	4-layer board [impedance control — differential 100Ω; single 50Ω]	
Input	4x HDMI 1x RS-232 5x IR socket for IR receiver	1x RJ-45 1x IR socket for IR receiver
Output	4x RJ-45 4x HDMI 5x IR socket for IR blaster	1x HDMI 1x IR socket for IR blaster
HDMI Input selection	Push-in button / IR remote control / RS-232 control	IR remote control
HDMI source control	Controllable via IR pass-through from IR receiver at RX to IR blaster at TX	
IR remote control	Electro-optical characteristics: π = 25° / Carrier frequency: 20-60kHz	
HDMI connector	Type A [19-pin female]	
RJ-45 connector	WE/SS 8P8C with 2 LED indicators	
RS-232 connector	DE-9 [9-pin D-sub female]	
3.5mm connector	Earphone jack for IR blaster **[All IR Out]** IR control on all source devices **[IR1~IR4]** IR control on individual source device Earphone jack for IR receiver **[System IR]** Receives IR commands from remote control **[IR1~IR4]** Receives IR commands from individual remote control	Earphone jack for IR blaster **[IR]** IR control on individual display device Earphone jack for IR receiver **[IR]** Receives IR commands from remote control

Mechanical		HDM-MX-2414C	HDM-MX-2414C-RX
Enclosure		Metal case	
Dimensions (L x W x H)	Model	TBA	TBA
	Package	TBA	
	Carton	TBA	
Weight	Model	TBA	TBA
	Package	TBA	
Fixedness		1U rack-mount with ears Wall hanging holes	Wall-mount with screws
Power supply		12V 5A DC	5V 2A DC
Power consumption		20 Watts [max]	1 Watt [max]
Operation temperature		0~40°C [32~104°F]	
Storage temperature		-20~60°C [-4~140°F]	
Relative humidity		20~90% RH [no condensation]	

** The HDM-MX-2414C-RX has been tested extensively and found that it doesn't require external power supply. If in rare situation you find it cannot work with the HDM-MX-2414C, please use any +5V power adapter to plug in the power jack and see if it can work. If not, please contact your technical support for further service.*

PACKAGE CONTENTS

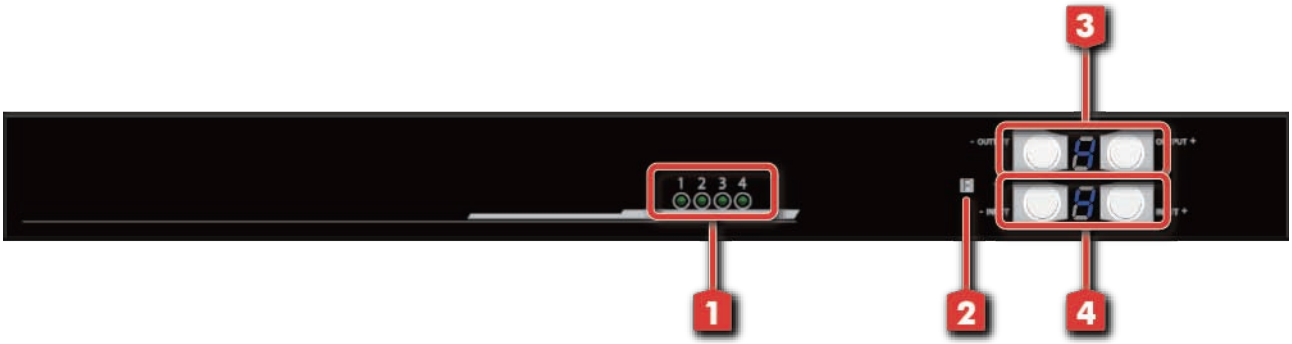
- 1x HDM-MX-2414C
- 5x IR receiver
- 1x DC 12V 5A
- 1x Rack-mounting ear set
- 1x Installation software CD
- 4x HDM-MX-2414C-RX
- 1x IR blaster*
- 4x DC 5V 2A
- 1x IR Remote control*
- 1x User Manual

** Additional IR blaster and IR remote controll can be purchased as optional accessories to control the HDMI sources located separately.*

PANEL DESCRIPTIONS

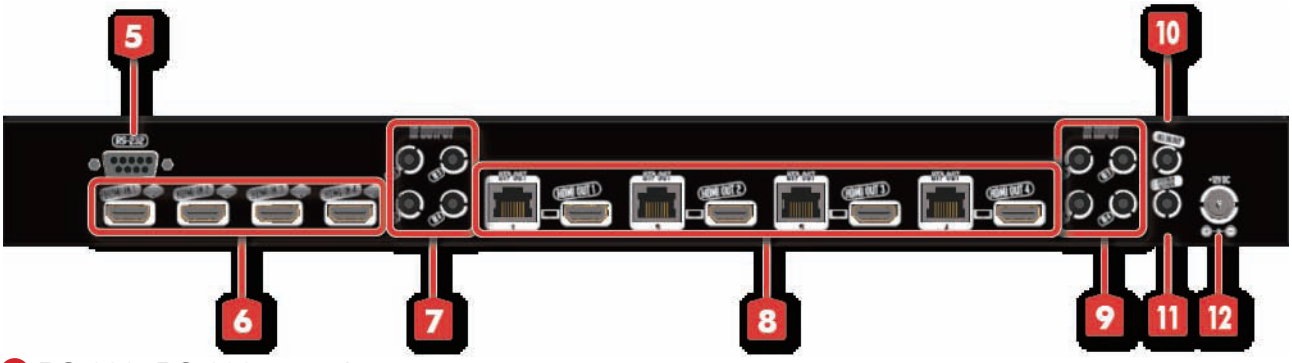
Transmitting unit ► HDM-MX-2414C

Front Panel



1. **Source Status:** Input source indicator LED
2. **IR SENSOR:** IR sensor for receiving the IR commands from IR remote
3. **Output Push Button & 7-segment LED:** Front panel push buttons used to select the number of display channel & LED display for output ports
4. **Input Push Button & 7-segment LED:** Front panel push buttons used to select the number of input source & LED display for input channels

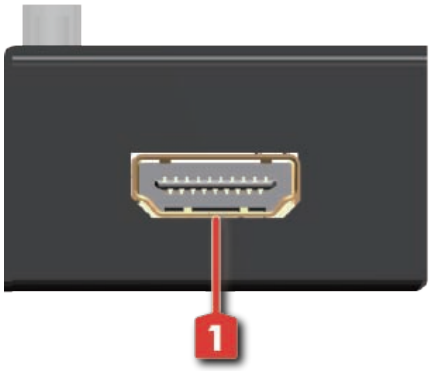
Rear Panel



5. **RS-232:** RS-232 control port
6. **INPUT 1-4:** HDMI inputs
7. **IR Blaster 1-4:** 3.5mm IR blaster socket for individual HDMI source control
8. **Output Port 1-4:** RJ-45 & local loopout HDMI outputs for each output channel
9. **IR Receiver 1-4:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver
10. **All IR Output:** 3.5mm IR blaster socket for HDMI source control on all 4 inputs
11. **System IR Receiver:** Ext. IR receiver
12. **+12V DC:** 12V DC power jack

Receiving unit ► HDM-MX-2414C-RX

Front Panel



IsometricView-F

❶ **HDMI OUT:** Connects to a HDMI display with a HDMI male-male cable

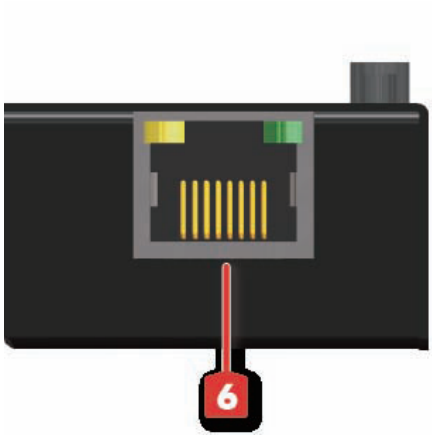
❷ **IR OUT:** Infrared 3.5mm socket for plugging in the extension cable of IR blaster

❸ **IR IN:** Infrared 3.5mm socket for plugging in the extension cable of IR receiver

❹ **LED Indicator**

❺ **MINI USB POWER:** Connects to a USB port for 5V DC power supply

Rear Panel



IsometricView-Buttom

❻ **UTP IN:** Plug in a Cat-5/5e/6 cable that needs to be linked to the transmitting unit HDM-MX-2414C.

❼ **Rotary control:** Adjust the 8-level equalization control to the received HDMI signals. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. Please adjust the signal level from 7 to 0 and stop turning the rotary switch whenever the audio/video is playing normally. Inappropriate signal level setting may cause overpowering issue that would shorten the product life significantly!

IR PASS-THROUGH

IR Extenders

IR Blaster

IR Receiver

IR Sockets

HDM-MX-2414C

All IR Out: The default location for IR blaster to transmit all IR command signals received from any of the four remote receivers to all of the HDMI sources.

IR BLASTER 1-4: IR blaster connected here can only transmit IR command signals from the remote receivers that are setting at respective input channel from 1 to 4.

System IR: Receives IR commands from remote control

IR RECEIVER 1-4: Receives IR commands from individual remote control.

HDM-MX-2414C-RX

IR BLASTER: IR control on individual display device

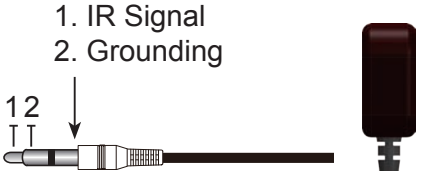
IR RECEIVER: IR receiver connected here can receive all IR command signals from the IR remote controls of HDM-MX-2414C and all other HDMI source devices.

CAUTION!

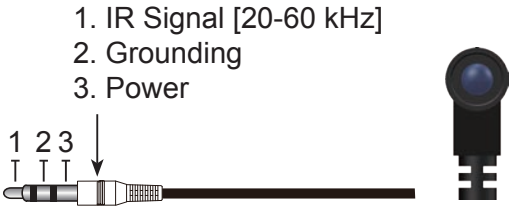
Incorrect placement of IR Blaster and Receiver may result in the failure of the IR extenders. Please check carefully before plugging in the IR extender to the respective IR sockets. Warranty will not cover the damage.

Definition of IR Earphone Jack

IR Blaster



IR Receiver



You can buy any IR extension cables in the market that are compatible to the definition of the IR sockets for the matrix if necessary for replacement use. However, IR cables longer than 2m (6-ft) may not work

HARDWARE INSTALLATION

HDM-MX-2414C as master

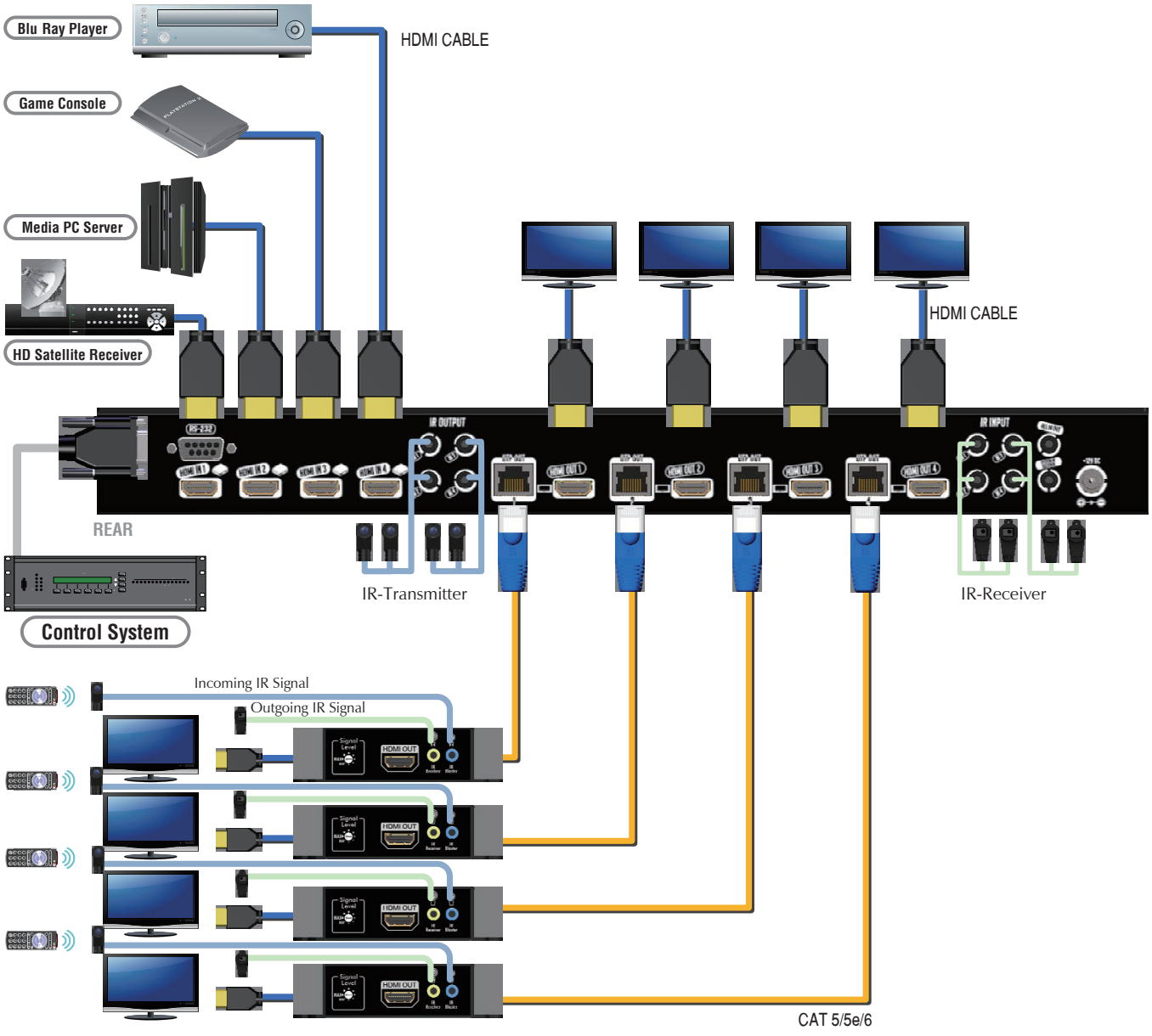
1. Connect all sources to HDMI Inputs on the 4x4 HDMI over **CAT.X** matrix master HDM-MX-2414C
2. Connect each **CAT.X** output port on the HDM-MX-2414C to respective **CAT.X** input on the remote receiver HDM-MX-2414C-RX
3. Connect IR blaster to the HDM-MX-2414C and direct the IR blaster to point towards the built-in IR receiver of the HDMI source devices.
4. Connect the +12V 5A DC power supply to the HDM-MX-2414C
5. Power on all HDMI sources

HDM-MX-2414C-RX as receiver

1. Connect each HDMI output to HDMI displays
2. Connect the **CAT.X** input on the HDM-MX-2414C-RX to the **CAT.X** output on the HDM-MX-2414C
3. Connect IR receiver and place the IR receiver at the appropriate position that can receive the IR signals sent from the users.
4. Dial the 8-level rotary control switch to adjust the HDMI signal level until the picture and sound are clear. It is recommended to dial from weakest to strongest to find the optimal visual experience.

CONNECTION DIAGRAM

HDMI
RS-232
CAT5/5e/6
IR (outgoing)
IR (incoming)



OPERATION APPROACH

Method A: Push-in Button

1. IN/OUT MAP

1) Use the “+”or “-“ output push button to select the number of display
2) Use the “+”or “-“ input push button to select the number of input source

“+”: change selected input/output port in ascending order

“-” : change selected input/output port in descending order

After you select the desired input/output port, the LED will blink twice and the setting will be effective

2. Save Mapping Mode

1) Keep pushing “output+ (save)”button until the output LED shows “d.” to enter the Save Mapping Mode.
2) Use the “+”or “-“ input push button to select the mapping configuration (0~7) which you want to save current input/output mapping
3) After you select the desired mapping configuration number, the LED will blink twice and the mapping setting will be saved
4) If you push the “output- (preset)”button before the mapping setting is saved, the LED will show “—”“—”to quit the Save Mapping Mode

3. Preset Mapping Mode

1) Keep pushing “output- (preset)”button until the output LED shows “P.” to enter the Preset Mapping Mode.
2) Use the “+”or “-“ input push button to select the saved mapping configuration (0~7) which you want to recall
3) After you select the desired mapping configuration number, the LED will blink twice and the mapping setting will be effective
4) If you push the “output+ (save)”button before the mapping setting is effective, the LED will show “—”“—”to quit the Preset Mapping Mode

4. Default EDID Mode

1) Push “input+(default)”button to select the input channel which you want to learn default EDID and then keep pushing “input+(default)”button when you select your desired input channel
2) Push the “+”or “-” output push button and then the LED will show “E”“d” one time to enter Learn Default EDID Mode

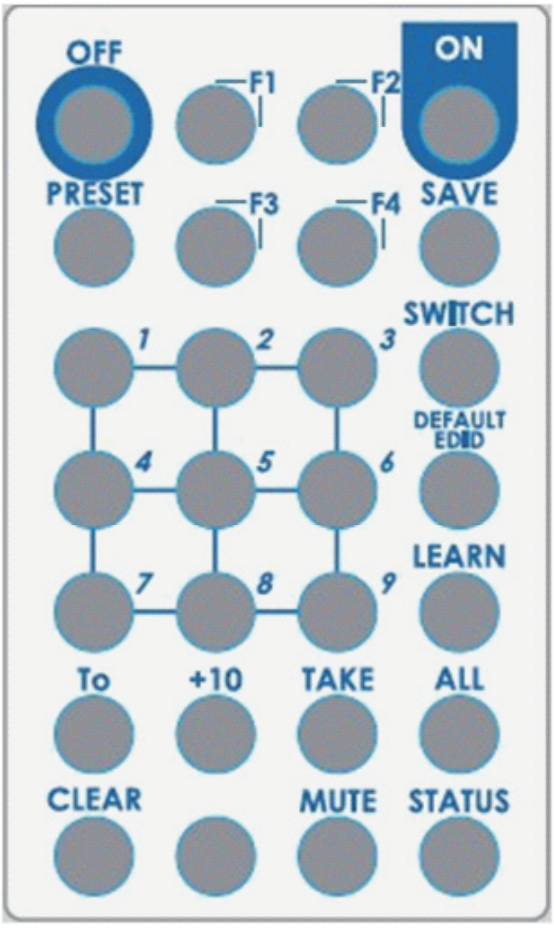
3) Use “+”or “-” output push button to select the default EDID mode(1~8)
4) Release “input+(default)”button after selecting the desired default EDID mode, and then the LED will blink twice and the setting will be effective
5) It will quit the Learn Default EDID Mode if you push the “input- (learn)”button before the setting is effective
6) The LED will show “0”“0” if the setting is success
The LED will show “F”“F” if the setting is failure

5. EDID Learning Mode

1) Push “input-(learn)”button to select the input channel which you want to learn EDID from HDMI output and then keep pushing “input-(learn)”button when you select your desired input channel
2) Push the “+”or “-” output push button and then the LED will show “E”“L” one time to enter Learn Output EDID Mode
3) Use “+”or “-” output push button to select the output port number
4) Release “input+(default)”button after selecting the desired output port number, and then the LED will blink twice and the setting will be effective
5) It will quit the Learn Output EDID Mode if you push the “input+ (default)”button before the setting is effective
6) The LED will show “0”“0” if the setting is success
The LED will show “F”“F” if the setting is failure

Method B: IR Remote Control

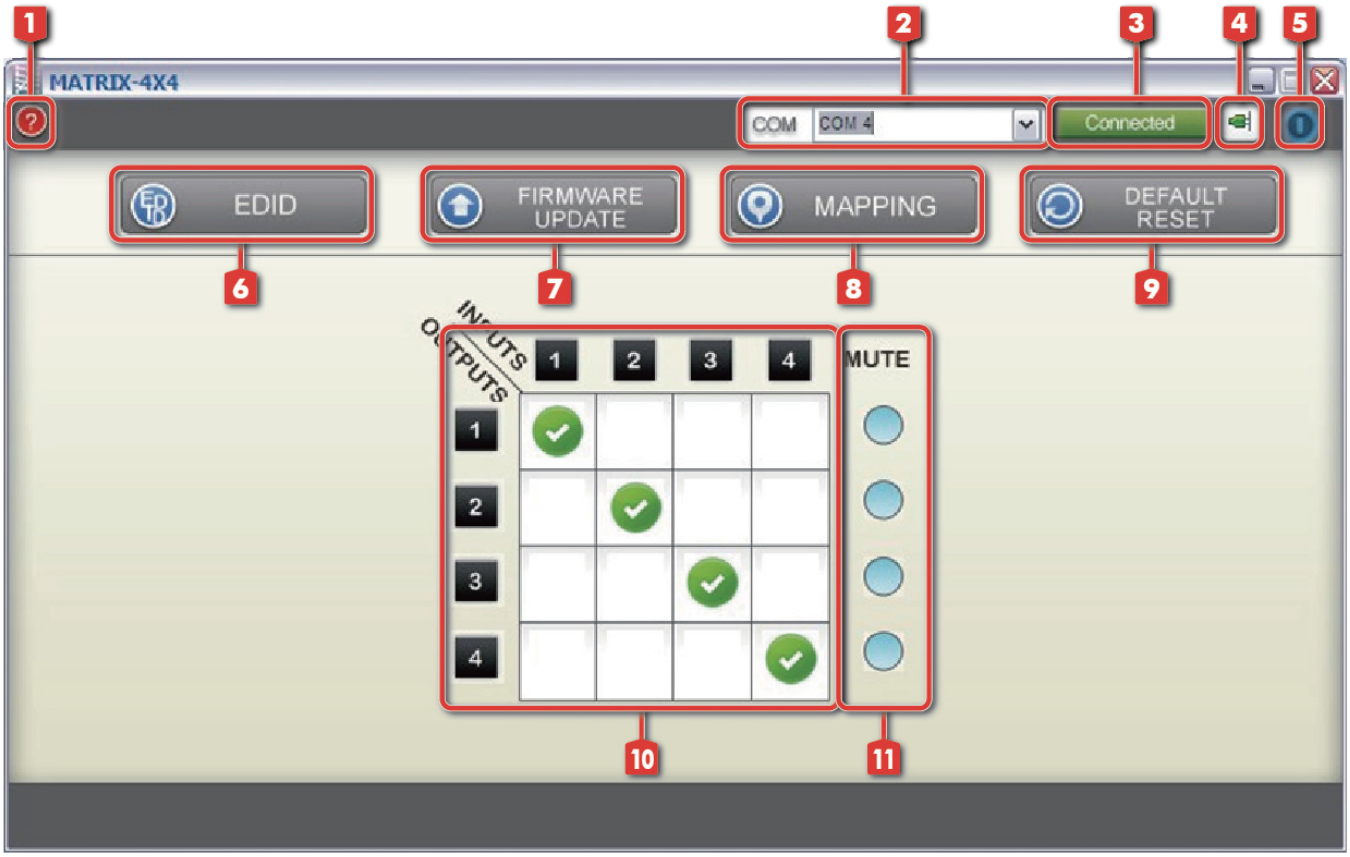
Button	Function
ON	Power on the matrix switcher
OFF	Standby mode
PRESET	Preset mapping mode
SAVE	Save current mapping mode
Number buttons 1-9	Select a number
+10	Reserved
To	Transfer key
TAKE	Trigger the previous setting
SWITCH	Begin input and output selection
DEFAULT EDID	Begin default EDID selection
LEARN	Begin EDID learning from one output
ALL	Select all inputs or outputs
CLEAR	Clear the previous IR operation procedure
MUTE	Turn off output’s video and audio
STATUS	Preset output status
F1	Reserved
F2	Reserved
F3	Reserved
F4	Reserved



Operation	Procedure	7-Segment LED
IN/OUT Switch	Switch + **number(input)** + To + **number(output)** + Take	
Ex: Input 3 To Output 4	1.Press “SWITCH” button	- -
	2.Press number key “3” to select Input	- **3**
	3.Press “To” button	- **3**
	4.Press number key “4” to select Output	**4** **3**
	5.Press “TAKE” button	**4** **3**
	Switch + **number(input)** + To + **All(output)** + Take	
Ex: Input 3 To Output All	1.Press “SWITCH” button	- -
	2.Press number key “3” to select Input	- **3**
	3.Press “To” button	- **3**
	4.Press “ALL” to select All Output	**A** **3**
	5.Press “TAKE” button	**4** **3**
Output Status	Status + **number(output)** + Take	
Ex: Output 4 (Input 2)	1.Press “STATUS” button	- -
	2.Press number key “4” to select Output	**4** -
	3.Press “TAKE” button	**4** **2**
Factory Reset	Status + Status + Status + Take	
	1.Press “STATUS” button	- -
	2.Press “STATUS” button	d -
	3.Press “STATUS” button	d d
	4.Press “TAKE” button	**1** **1**
Learn default EDID	Default EDID + **number(1-8 default EDID)** + To + **number(input)** + Take	
Ex: Default EDID 2 Input 3	1.Press “DEFAULT EDID” button	**E** d
	2.Press number key “2” to select default EDID	**2** d
	3.Press “To” button	**2** d
	4. Press number key “3” to select Input	**2** **3**
	5.Press “TAKE” button	0 **F** 0 (success) **F**(fail)
	Default EDID + **number(output)** + To + **All(input)** + Take	

Ex: Default EDID 2 Input All	1.Press “DEFAULT EDID” button	**E** d
	2.Press number key “2” to select default EDID	**2** d
	3.Press “To” button	**2** d
	4.Press “ALL” to select All Input	**2** **A**
	5.Press “TAKE” button	0 **F** 0 (success) **F**(fail)
Learn Output EDID	Learn + **number(output)** + To + **number(input)** + Take	
Ex: Learn Output 2 Input 3	1.Press “LEARN” button	**E** **L**
	2.Press number key “2” to select Output	**2** **L**
	3.Press “To” button	**2** **L**
	4. Press number key “3” to select Input	**2** **3**
	5.Press “TAKE” button	0 **F** 0 (success) **F**(fail)
	Learn + **number(output)** + To + **All(input)** + Take	
Ex: Learn Output 2 Input All	1.Press “LEARN” button	**E** **L**
	2.Press number key “2” to select Output	**2** **L**
	3.Press “To” button	**2** **L**
	4.Press “ALL” to select All Input	**2** **A**
	5.Press “TAKE” button	0 **F** 0 (success) **F**(fail)
Save Current Mapping	Save + **number(1-8 storage site)** + Take	
Ex: Save current mapping to 5	1.Press “SAVE” button	d -
	2.Press number key “5” to select the storage site	**5** -
	3.Press “TAKE” button	
Preset Mapping	Preset + **number(1-8 storage site)** + Take	
Ex: Preset saved mapping from 5	1.Press “PRESET” button	**P** -
	2.Press number key “5” to select the storage site	**5** -
	3.Press “TAKE” button	
Mute Output	Switch + **Mute** + To + **number(output)** + Take	
Ex: Mute Output 3	1.Press “SWITCH” button	- -
	2. Press “MUTE” button	- 0
	3.Press “To” button	- 0
	4. Press number key “3” to select Output	**3** 0
	5.Press “TAKE” button	**3** 0
	Switch + **Mute** + To + **All(output)** + Take	
Ex: Mute All Output	1.Press “SWITCH” button	- -
	2. Press “MUTE” button	- 0
	3.Press “To” button	- 0
	4. Press “ALL” to select all output	**A** 0
	5.Press “TAKE” button	**4** 0

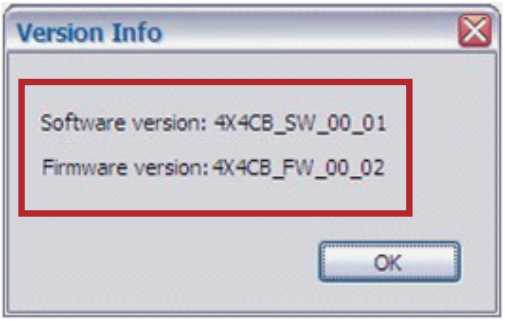
Method C: Software Control through RS-232 port



❶ FW/SW Version Button
❷ COM Port Selection
❸ Connection Status
❹ Connect/Disconnect Button
❺ Power On/Off Button
❻ EDID Button
❼ Firmware Update Button
❽ Mapping Button
❾ Default Reset Button
❿ In/Out Switch Button
⓫ Mute Output Button

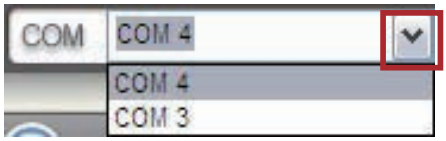
1. FW/SW Version Button

Click " " button to show version information.



2. COM Port Selection

Click "▾" button to select COM Port



3. Connection Status

1) Connected Status:

2) Connecting Status:

3) Disconnected Status:

4. Connect/Disconnect Button

Click this button "🔌" to change connection status

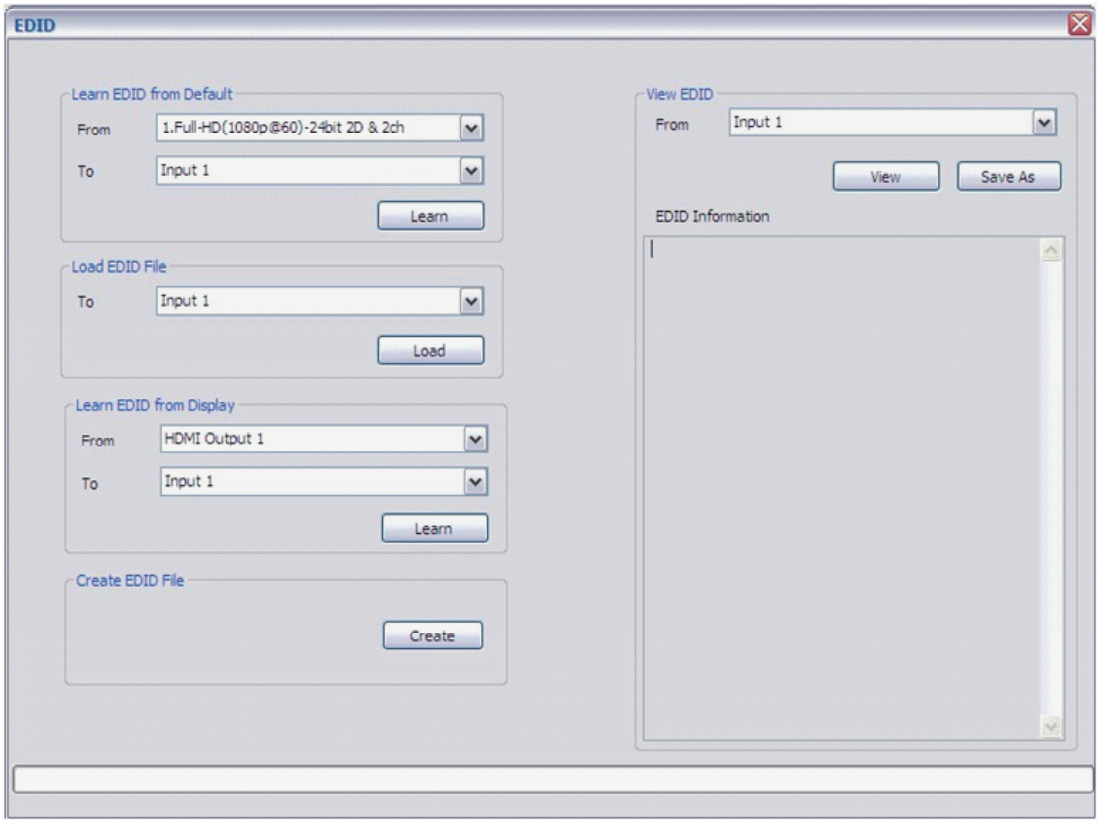
5. Power On/Off Button

Click this button to power on/off

"⏻" **Power on status(Blue):** Click this button to power off device(Standby Mode)

"⏻" **Power off status(Red):** Click this button to power on device

6. EDID Button

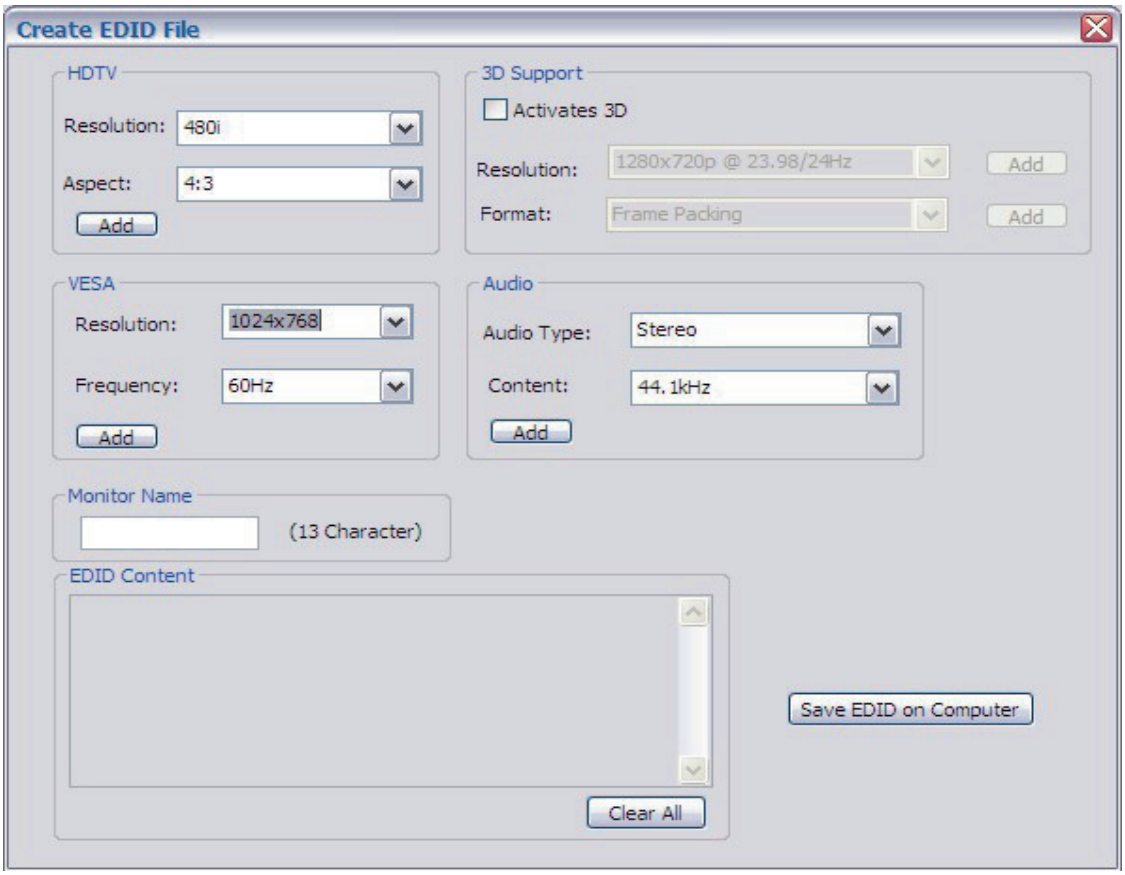


1. **Learn EDID from Default**
   d) Select Default EDID(1-8 Default EDID)
   e) Select Input
   f) Click “Learn” button to learn default EDID

2. **Load EDID File to Input**
   a) Select Input
   b) Click “Load” button to select the EDID file

3. **Learn EDID From Display**
   a) Select HDMI output
   b) Select Input
   c) Click “Learn” button to learn display EDID

4. **Create EDID File**
   a) Click **“**Create**”** button to create EDID file
   b) Select the EDID content
   c) Click “Save EDID on Computer” to save the generated EDID as a file

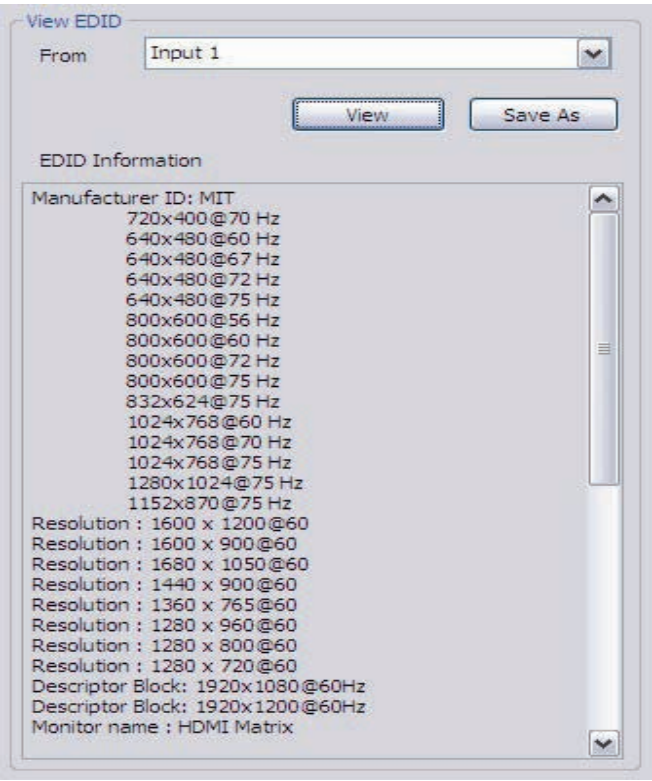


5. Create EDID File

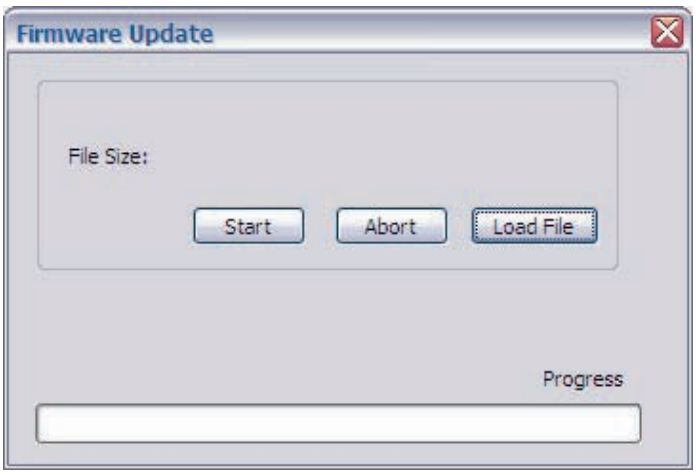
a) Select Input, HDMI output, or From File

b) Click “View” button to read the EDID and analysis

d) Click “Save As” to save the read EDID as a file on computer

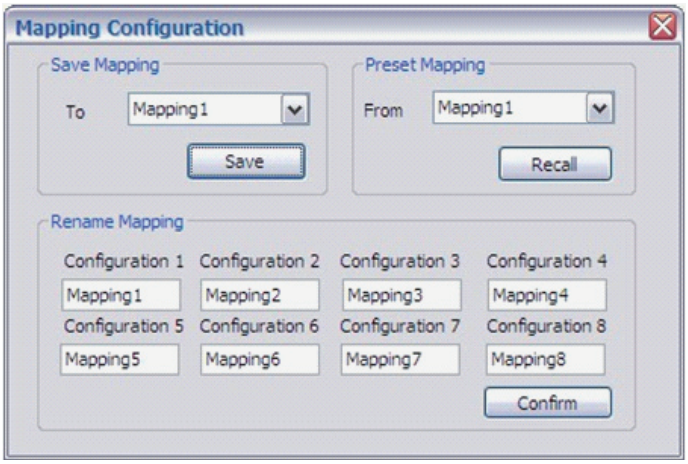


7. Firmware Update Button



1) Click “Load File” to select the firmware file which you want to update
2) Click “Start” button to begin the firmware update
3) Keep pushing “Input-” button of the front panel when you do the firmware update
4) Quickly remove and reconnect the power input connector
5) Release “Input-” button after the firmware update is completed

8. Mapping Button



1) **Save Mapping:**
   a) Select Mapping(1-8)
   b) Click “Save” button to save current mapping

2) **Preset Mapping:**
   a) Select Mapping(1-8)
   b) Click “Recall” button to recall previous mapping which are saved

3) **Rename Mapping:**
   a) Rename the mapping(Mapping1-Mapping8)
   b) Click “Confirm” button to confirm the change

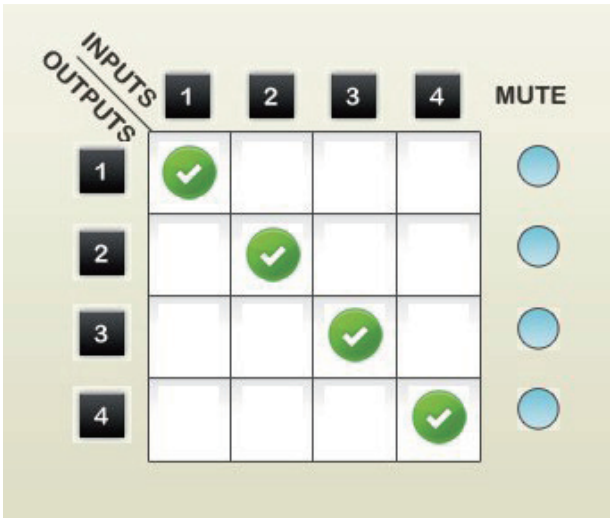
9. Default Reset Button

Click this button to do factory default reset

The default reset process will take about 80~90 seconds

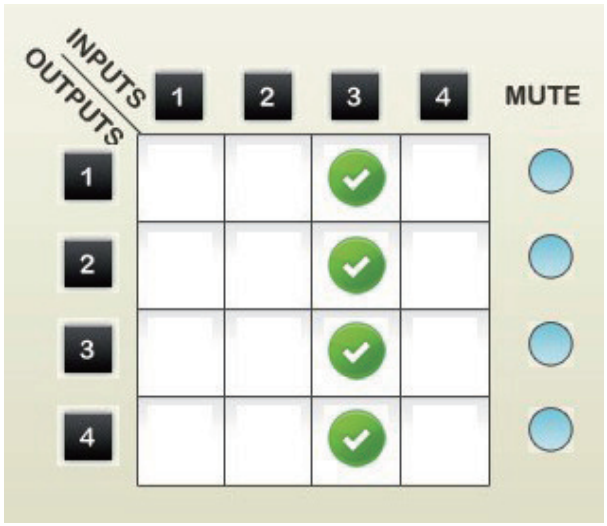
10. In/Out Switch Button

Click the button on the checkerboard to select Input & Output port



User can click the input number button to let all outputs select the same input

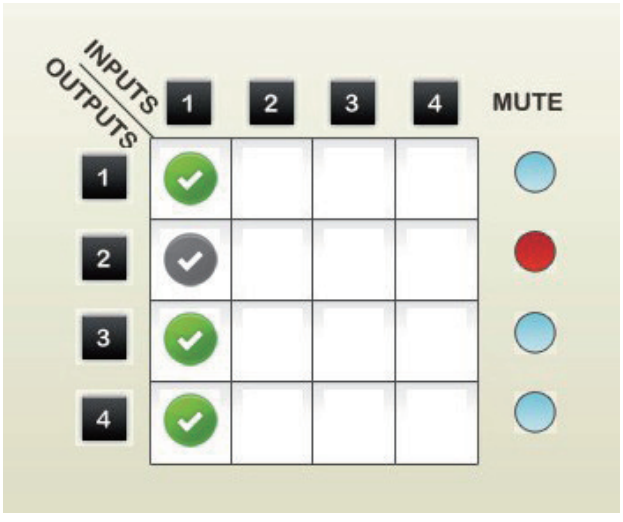
Ex: All outputs select input 3



11. Mute Output Button

Click the circle button to turn off output's video and audio

Ex: Mute Output 2



EDID LEARNING

The EDID learning function is only necessary whenever you encounter any display on the HDMI output port that cannot play audio and video properly. Because the HDMI source devices and displays may have various level of capability in playing audio and video, the general principle is that the source device will output the lowest standards in audio format and video resolutions to be commonly acceptable among all HDMI displays. In this case, a 720p stereo HDMI signal output would be probably the safest choice. Nevertheless, the user can force the matrix to learn the EDID of the lowest capable HDMI display among others to make sure all displays are capable to play the HDMI signals normally.

There are THREE methods to do EDID Learning as below,

1. **Front Panel Push-in Button**: Please refer to the **Operation Approach\ Method A: Push-in Button**
2. **IR Remote Control**: Please refer to the **Operation Approach\ Method B: IR Remote Control**
3. **Software Control**: Please refer to the **Operation Approach\ Method C: Software Control through RS-232 port**

There are eight embedded default EDID as below,

1. **Full-HD(1080p@60)**-24bit 2D & 2ch
2. **Full-HD(1080p@60)**-24bit 2D & 7.1ch
3. **Full-HD(1080p@60)**-24bit 3D & 2ch
4. **Full-HD(1080p@60)**-24bit 3D & 7.1ch
5. **HD(1080i@60)(720p@60)**-24bit 2D & 2ch
6. **HD(1080i@60)(720p@60)**-24bit 2D & 7.1ch
7. **Full-HD(1080p@60)**-36bit 2D & 2ch
8. **Full-HD(1080p@60)**-36bit 2D & 7.1ch

FAQ

Q The quality of output video is not good enough, how can I do?

A *Please adjust the 8-level equalization on the receiver units. The HDMI signal level varies from 0 (strongest) to 7 (weakest) for respective transmission length from longest possible range to short distance. It is recommended to switch from 7 to 0 to find the optimal visual experience.*

Q Can I use any kind of LAN cable?

A *Please check the NOTICE section for more information about how to pick up a suitable cable.*

Q Can every TV work with the HDMI matrix?

A *Basically, the answer is YES. But if your TV can not support 1080p, please refer the EDID LEARNING section to learn EDID from your TV.*

Q What is EDID? Why do I need to learn EDID?

A *EDID contains the whole information of the display such as the resolution and audio setting which this display can support. Therefore, based on the EDID information, media player will pick up the most suitable resolution and audio setting to the display. In order to faithfully transmit the EDID information from display to the media player, learning EDID from display to this device is necessary.*

Q What should I do to learn EDID for the matrix?

A *Due to the limitation of HDMI, the source device can only output one format of video and audio. In other words, the source device cannot output 720p and 1080p video at the same time, or output stereo and surround sound at the same time. Therefore, you may need to manually setup the DIP switch for each HDMI input for desirable audio/video output format. The mechanism of EDID Learning is to pick up the HDMI display with the lowest capability among the ones you would use for this input source. For example, if user would like to play the Input-2 upon output-2, output-3 and output-4, and only output-3 cannot support 1080p [support up to 720p only], please learn the EDID from the display connected to the output-3 at the Input-2 port. Of course, if outpt-3 would get the HDMI signals from every HDMI input, please learn EDID information from output3 to all four HDMI inputs. For more information about EDID Learning, please refer to EDID LEARNING section.*

Q My TV can support 1080p, but why there is no audio?

A *The default setting of this device is 1080p & 7.1ch audio, so there would be a problem if the TV cannot support 7.1ch audio. Please change the DIP switch of the chosen input from Default Mode to Safe Mode.*

Q When I set an audio amplifier (AV receiver) between TV and the matrix to extract 7.1ch audio, but why there is still no audio?

A *Basically, the default DIP switch setting of the chosen input can support 7.1ch audio, but the problem is that the EDID of the amplifier still cannot match the default setting. Therefore, the best method is to learn EDID from the amplifier directly. Please refer to EDID LEARNING section and follow the steps to learn the EDID. When learning EDID from the amplifier, user just needs to connect the matrix and amplifier.* ***Please don't connect HDMI cable between amplifier and TV when the EDID learning is proceeding.***

Q When I play the same content upon multi-displays, why only the TV equipped with amplifier can have 7.1ch audio, and the others don't have 7.1ch audio even no stereo?

A *Due to the limitation of HDMI, the source only can choose one video and one audio format to play, which can be either 1080p and 7.1ch or 1080p and stereo audio. It means when the user sets the matrix at 1080p and 7.1ch, the source will only play the content under this format. Therefore if the TV cannot decode 7.1ch audio, there is definitely no audio.*

NOTICE

1. If the DVI or HDMI device requires the EDID information, please use EDID Reader/Writer to retrieve and provide DVI/HDMI EDID information.
2. All HDMI over CAT5 transmission distances are measured using Belden 1583A CAT5e 125MHz LAN cable and ASTRODESIGN Video Signal Generator VG-859C & VG-870B.
3. The transmission length is largely affected by the type of LAN cables, the type of DVI sources, and the type of DVI display. The testing result shows solid LAN cables (usually in bulk cable 300m/1000ft form) can transmit a lot longer signals than stranded LAN cables (usually in patch cord form). Shielded STP cables are better suited than unshielded UTP cables. A solid UTP CAT5e cable shows longer transmission range than stranded STP CAT6 cable. For long extension users, solid LAN cables are the only viable choice.
4. EIA/TIA-568-B termination (T568B) for LAN cables is recommended for better performance.
5. To reduce the interference among the unshielded twisted pairs of wires in LAN cable, one can use shielded LAN cables to improve EMI problems, which is worsen in long transmission.
6. Because the quality of the LAN cables has the major effect on how long the transmission limit can achieve and how good is the received picture quality, the actual transmission range is subject to one's choice of LAN cables. For desired resolutions greater than 1080i or 1280x1024, a Cat-6 cable is recommended.
7. If your HDMI display has multiple HDMI inputs, it is found that the first HDMI input [HDMI input #1] generally can produce better transmission performance among all HDMI inputs.
8. Additional IR remote controls and IR blasters can be purchased as optional accessories to control the HDMI sources located separately.

PERFORMANCE GUIDE

Performance rating		Type of category cable		
Wiring	**Shielding**	**CAT5**	**CAT5e**	**CAT6**
Solid	Unshielded (UTP)	★★★	★★★★	★★★★★
	Shielded (STP)	★★★	★★★	★★★★
Stranded	Unshielded (UTP)	★	★★	★★
	Shielded (STP)	★	★	★★
Termination		Please use **EIA/TIA-568-B** termination (**T568B**) at any time		

WARRANTY

The SELLER warrants the **HDM-MX-2414C 4x4 HDMI Deep Color & full 3D over single Cat.X matrix** with IR Pass-through free from defects in the material and workmanship for 1 year from the date of purchase from the SELLER or an authorized dealer. Should this product fail to be in good working order within 1 year warranty period, The SELLER, at its option, repair or replace the unit, provided that the unit has not been subjected to accident, disaster, abuse or any unauthorized modifications including static discharge and power surge. This warranty is offered by the SELLER for its BUYER with direct transaction only. This warranty is void if the warranty seal on the metal housing is broken.

Unit that fails under conditions other than those covered will be repaired at the current price of parts and labor in effect at the time of repair. Such repairs are warranted for 90 days from the day of reshipment to the BUYER. If the unit is delivered by mail, customers agree to insure the unit or assume the risk of loss or damage in transit. Under no circumstances will a unit be accepted without a return authorization number.

The warranty is in lieu of all other warranties expressed or implied, including without limitations, any other implied warranty or fitness or merchantability for any particular purpose, all of which are expressly disclaimed.

Proof of sale may be required in order to claim warranty. Customers outside Taiwan are responsible for shipping charges to and from the SELLER. Cables and power adapters are limited to a 30 day warranty and must be free from any markings, scratches, and neatly coiled.

The content of this manual has been carefully checked and is believed to be accurate. However, The SELLER assumes no responsibility for any inaccuracies that may be contained in this manual. The SELLER will NOT be liable for direct, indirect, incidental, special, or consequential damages resulting from any defect or omission in this manual, even if advised of the possibility of such damages. Also, the technical information contained herein regarding the **HDM-MX-2414C** features and specifications is subject to change without further notice.

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